Abstract.
Increasing water tourism popularity and importance of active tourism sources in Nature make us to give more engineering experience into development of active tourism infrastructure. The lack of infrastructure near rivers and lakes, lack of tourism development system for regional and national planning purposes reflects in to water tourist damaging country image.

The article presents application of engineering experience into practical problems solution, using project “Special Plan for National Water Tourism Routes”. Engineering based water tourism infrastructure – camp places, stopping places, rest places near water routes will be sign of friendly water tourist environment for local and foreign tourists.

The article is focused on the explanation of existing situation based on water tourism popularity, boat and kayak tenancy business and marketing. Using survey research analysis results, the article itemizes tourist’s needs and evaluates infrastructure committed to them. Engineering infrastructure solutions, offered in it, allows to establish infrastructure near the water deposits, thus minimizing damage, imposed by water tourism, and increasing possibilities for active tourism in Lithuania. This article assign the examples of problematic situations from nowadays and bring the possible solutions.

Keywords: water tourism routes, tourism infrastructure, water tourist, special plan, tourism paths, active tourism.

1. Introduction

Water tourism is among the most rapidly developed and prioritized tourism streamlines in Lithuania. According to Small Ship Inspectorate more than 37,000 leisure boats, sail and motorized yachts are navigating Lithuania’s inner and littoral waters. Several thousand unregistered natatorial devices (canoes, kayaks, boats, rafts, etc.) are also used for the tourism purposes.

Fresh water tourism is gaining popularity and attracts considerable tourist numbers. Projects, scheduled in the 2003-2006 National Tourism Development Program [1], are implemented: East Lithuania’s and South Lithuania’s water tourism possibility studies have been generated, special plan of the national water tourism routes accomplished, other projects regarding the water tourism development [2, 3]. During the project preparation period analysis of water tourism paths was fulfilled. Results indicate rapid water tourism growth in Lithuania, but higher service quality standards are yet to come. In the final chapter, describing the results, proposals are being articulated: definition of the most popular water tourism routes and development of tourist orientated infrastructure on those routes.

Infrastructure on the water routes is reputed to be one of the main tools fostering water tourism development in Lithuania, yet in parallel with development it is the basic preventive remedy against the damage, caused to environment by flocking tourists. By implementing water tourism infrastructure projects Lithuania is expanding active tourism niche according to precept of sustainable development [4].

Many tourism planning texts provide substantial detail on the methods and contents of audits of the resources available for traditional forms of tourism [5, 6, 7].

2. Problematic situation, water tourism popularity

Water tourism development in country’s inner waters is mostly orientated to kayak, canoe, boat tenancy activities and handling of tourist needs. Development is
extremely indiscrete both by regional principle and by extent of public infrastructure development. Boat and kayak tenancy business is the fastest growing segment, especially in east and south Lithuania and near the small rivers. But such enterprises mostly are on float due to daring attempts of the separate enthusiasts. Nemunas, Neris water ways are not functioning, Ula, Lakaja, Zeimenas rivers are overloaded and are not fit for massive flows, Rytu Aukstaitija lake district lacks investment.

Popularity of water tourism in Lithuania can be illustrated by several indicators:
- possibility to hire tourism devices while servicing the flow of water tourists,
- erected infrastructure,
- marketing.

Water tourism in Lithuania exceptionally grew in latter 4 years. About 30 suppliers offered tenancy service in 2003; in 2007 one could calculate no less than 450. It’s very popular in country to hire water tourism devices for recreational purposes during leisure time or holidays.

Ula river water tourism path is located in Dzukija national park, area, sensitive to human activities, which has its own legal status and strict operational and tourism effect regulations. On the other hand, Ula water tourism route possesses exceptional role in Lithuania, number of water tourism devices there is limited up to 100 per day – meaning 200 people per day (affirmed by director of the Dzukija national park on April 6, 2006, commandment Nr. 38). Need for the tourism flow regulations appeared because of environmental sensitiveness and due to heavy-duty interest, shown by visitors – Ula river is considered to be one of the most adorable, interesting, popular rivers in Lithuania.

Antaliepte inland sea is abundantly visited by water tourists not only because of superb natural conditions, UAB “Degesa” played its role, too: very good infrastructure, guaranteed tenancy availability, clear routing system with descriptions, etc. By statement of the local service providers more than 5 000 visitors and tourists arrive there each seasonal weekend, which estimates 100-120 000 visitors and tourists per season.

Lavish number of canoe and kayak tenancy enterprises exists in country in our days, but investments are directed mostly into devises and, accordingly, transport systems for them, also lodging. Public infrastructure near the water routes is extremely minor, situation is a bit better in national and regional parks, near Nemunas river.

In Lithuania like in other countries protected areas mostly attracts tourists [9]. According to data, provided by Protected Area Service, it is not “that” small amount of attention dedicated to development of the recreational infrastructure. Relatively the biggest part in recreational infrastructure is composed by campsites, resting places, respite places. That is the most common infrastructure used by holidaymakers, which makes recreation near the lakes and forests possible. But the most part of it is left from the times behind. And it’s important to stress that about 60 percent of campsites, resting places, respite places are located near water deposits.

Huge importance for the country had the PHARE investment project prosecuted by State tourism department near Economy ministry – “tentative development of the Nemunas tourism route” (Nr. 2003.005-809/01/02). Using project funds 19 quays (6 stationary and 13 mobile) were equipped along all the Nemunas course, from Druskininkai up to Rusne. Project involves 12 municipalities (Silute, Jurbarkas, Sakiai, Kaunas, Kaisiadorys, Alytus, Varena, Prienai district, Alytus and Kaunas city, Pagegiai, Birstonas, Druskininkai municipalities) in five regions – Alytus, Kaunas, Marijampole, Taurage, Klaipeda.

During first stage (October 2004 – May 2005) technical documentation - designing was readied. Second stage – 2005-2006: in Nemunas river seven stationary quays were being renovated and constructed and 12 mobile built. All quays equipped with parking spots and resting places, field furniture, information stands. Municipalities and corresponding institutions committed to renovate existing and mount new access and approach roads, settle quay’s surroundings, install camping sites for tourists, arrange attend able objects, secure proper quay

Fig 1. Infrastructure quantity in state parks, state and biosphere reservations, total number per year [4].
maintenance and safe navigation. The Nemunas tourism route guide, promo leaflets, booklet, info stands were published and distributed alongside.

Water tourists feel the lack of information about possible water tourism routes in media, press, and absence of so much needed specific literature or press makes things even worse. Most of the tourists are using information 20-30 years old, which comes from soviet period descriptions. Failure to provide special water tourism maps does not help either. Some publications that appeared during project enforcement period do not satisfy the water tourism market and, the most important, do not allocate the flows. It must be emphasized that there are no signing in area, too. The only thing one can find about the water tourism – separate signs installed by national, regional park administration or private self initiative. Such situation, when tourists are simply disorientated, is tremendously worsening water tourism conditions in Lithuania.

Modern technologies make the water route paper map less relevant, as GPS, or even mobile phone devices makes it possible to find your way. Still, lots of tourists are using, or/and see it more convenient, paper maps, rout signs, etc, therefore the demand for them should be satisfied, giving the possibility to use existing and find potential tourism paths.

3. Surveying research

Alongside project arrangement survey was conducted. In course of it 25 percent of all tenancy service providers, 100 of them, were questioned in November 2006. Survey [3] exposed that in latter years many starters in water tourism service providing business are planning to increase their stocks of water tourism inventory. Such indications are closely related with increasing demand in water tourism devices and constantly growing tourist numbers. Survey revealed even 45 percent who responded are going to increase fleet strength by 8-20 sitting places, 30% - 1-7, and 25% - by more than 21 place. (Fig 2)

Water tourism increasing popularity is demonstrated by fact that by the end of 2006 more than a quarter of suppliers were planning not just to buy new water tourism devices, but also to extend their service over bigger quantity of routes. The utmost development is being planned by larger-scale providers, having more than 40 sitting places and servicing more than one route.

According to respondents not that bad situation is about accessing water deposits, quite good accommodation possibilities exist on the already existing routes. Even 50% declared no problem in lodging provision, 66% - in accessibility. The main problems on routes are caused by non-existing route signing system, lack of specialized published materials, dedicated to water tourism and routes particularly, short time resting, and boarding - landing sites. According to survey 56% of respondents stressed the absence of signing in area, 59% - lack of literature, 53% - resting places and 47% - boarding-landing spots. (Fig 3.)

Another revealing criterion, defined during the survey was the duration of the water tourism season. Interesting to admit that the possible season of four months (beginning of June – end of September) was designated by survey participants – providers in bigger rivers (Merkys, Dubysa, Neris, Zeimena, etc.), although, after research made during expeditions and analyzing foreign experience, its obviously seen that water season in Lithuania could last more than 8 months. But thus can be achieved by changing routine public attitude, removing stereotypes.
4. Engineering decision making

According to expert view it is recommended in most important – national routes to secure the landing possibilities not far-between as 8-10 km. Free possibility to stop for a rest or to chose tourism source gives definitions and ways to measure and describe the quality of life [8]. Holiday camps, camping sites, quays could be established on the routes. Detailed assertions are listed below.

4.1. Installation of the holiday camps (campings)

Holiday camp, where about 20 tourists could stay, together with high level campsite, is dedicated both for water tourists and other visitors. There one should find water tourism items tenancy service, established sport fields, parking lot, gravel pavement, leisure lodging (up to 200m²) with toilet and shower, aerial illumination, local plumbing net with waterworks. Approximate establishment price about 1000 000 Lt.

4.2. Establishment of the campsites

Minimum size campsite, designed for 4 tents, 50 m², with gravel access road is used by water tourists as intermediate stop place. Essential facilities: 20 m long sandy riverside, 4 fire places, trash dumpster, bio toilet, ferry-bridge, stand. Preliminary establishment price is about 70 000 Lt.

In the middle size campsite comfortable asphalt bitumen access road is designed. Campsite is dedicated for 4-5 tents (50m² per each), with outside furniture, beach, bio toilet, trash collecting, bowers. Such campsites could be arranged on the rout’s starting and tail points, where comfortable approach while bringing canoes, other devices is on high demand. Here comes asphalt access with parking lot. Preliminary establishment price is about 150 000 Lt.

Maximum size campsite intended not only for water tourists, but for others who like water bind recreation, too. Up to 14-20 holidaymakers or tourists could stay there. In such type campsites one can rent water tourism device, find equipped sports fields, parking lot, gravel pavement, toilets and showers, aerial illumination, local plumbing system with waterworks. Preliminary establishment price is about 500 000 Lt.

It’s necessary to emphasize the importance of set to be bio toilets, as the way to guaranty the quality of sanitarian-hygienic conditions in all camps. However, because of the constantly growing tourism and entertainment market this part of service should be delegated to private enterprises. Incidentally, taking care permanently of sanitaria in campsites is neither municipality’s nor protected area administrations duties field. In this case the campsite’s pricing list should be adjusted.
Campsite’s accessibility matters should be solved during the stages of preparing technical or detailed projects. Standard cases examine situations, where accessibility lot covers 750m², when baring in mind small and medium level campsites and 3300m² – for high level campsites (parking lots included). These numbers should be corrected per each particular case, according to distance till the main road, cover shape, requirements for reconstruction or building. That’s why only typical plans are used in this special plan.

4.3. Establishment of the quay

Noncommercial quays are established based on private or noncommercial goals for the small, entertaining, sport and private boats to approach, park, depart, board and land.

Established noncommercial quay should include: 1) stationary embankment or other floating device, to which small, entertainment, sport and private boats can approach, moor, depart and passengers can safely board and land; 2) sufficient depth near the embankment, ensuring safe approach, departure and slow speed maneuver for the small, entertainment, sport and private ships; 3) information board, where name of the quay and its registration numbers are clearly indicated. Preliminary establishment price is about 500 000 Lt.

6. Conclusion

After assessing prepared documentation conclusion can be made that, additionally to existing, 2000 km of water tourism routes must be arranged in Lithuania; infrastructure, worth 55 000 000 Lt. should be established near these routes:

- Campsites constitute 50% of the overall would-be infrastructure amount,
- Quays – 20%,
- Camps (campings) – 12%,
- 18% - other public infrastructure (parking lots, view spots, etc.).

Just after establishing proper and sufficient infrastructure would be possible to develop water tourism in Lithuania acceptably.

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References